

REMARKS

Claims 1-9 are pending in the application. With this Amendment, claims 1 has been amended and claims 10-17 have been presented in order to further define the invention. No new matter has been added. Claim 10 contains subject matter from claims 2 and 7. Claim 11 is a combination of allowable claims 1, 2 and 7 and therefore it is respectfully submitted that claims 11-17 are in condition for allowance. Claims 12-17 are based upon prior pending claims 3-9, respectively.

Claims 1-6, 8 and 9 have been rejected under 35 U.S.C. § 102(e) as being anticipated by Adachi, (U.S. Patent No. 6,743,994).

Independent claim 1 has been amended to close the claim to additional components by replacing the transitional phrase "comprising" with "consisting of". As disclosed in column 2, lines 32-55, Adachi teaches a switch, comprising: a circuitry, provided with a first switching contact; a first spacer, laminated on the circuitry so as to provide a first space above the first switching contact; a first, elastic sheet member, laminated on the first spacer and provided with a second switching contact opposing to the first switching contact in the first space, the first sheet member being operable to deform while using the first space to bring the second switching contact into an electrical contact with the first switching contact; a second spacer, laminated on the first sheet member so as to provide a second space above a first part of the first sheet member; a second sheet member, laminated on the second spacer, the second sheet member being operable to deform while using the second space to thereby deform the first part of the first sheet member; and an elastic member, interposed between the first sheet member and the second sheet member at the second space, the elastic member having an elastic deformability which is higher than an elastic deformability of the first sheet member.

As set forth in column 2, lines 56, through column 3 line 7, a technical effect of the elastic member is to provide an elastic deformability which is higher than an elastic deformability of the first sheet member so that a repulsive force of the first part of the first sheet member is absorbed by the elastic member to improve the feeling of an operator at the switch operation.

As claimed, in claim 1 the contact type sensor of the present invention consists of a sponge and at least one membrane switch arranged thereunder. Therefore, it is extremely simple and requires less components than disclosed by Adachi. Further, the

purpose of the invention is to design a cost effective "skin" for a robot that is capable of perceiving which part of the robot is pressed. When a robot equipped with contact type sensor of the present invention meets a barrier, the outside surface of the sponge is pressed and the pressure is absorbed by the sponge and transferred to the membrane switch arranged on the other side of the sponge, so the switch is pressed down directly. Therefore, the robot can perceive the barrier at one direction, see page 1, lines 19-32 of the specification.

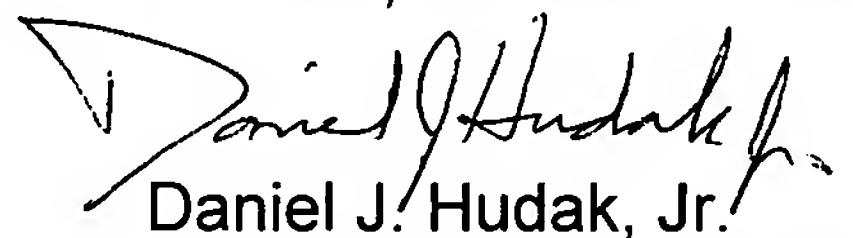
Furthermore, the claimed switch and the switch disclosed in Adachi are designed for different applications. The Adachi switch is designed for detecting contact at a point, whereas the claimed switch is designed to detect a much larger surface, commonly a barrier that a robot may meet when moving.

In view of the amendments and new claims presented it is respectfully submitted that the claims are in condition for allowance and a notice of such is earnestly solicited.

Should the Examiner have any questions regarding this response, a telephone call to the undersigned is greatly appreciated.

Respectfully submitted,

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